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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,281	12/20/2001	Guenael T. Strutt	42515	2371

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EXAMINER	
SAGAR, VIDYA S	
ART UNIT	**PAPER NUMBER**
2668	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,281	STRUTT, GUENAEL T.	
	Examiner	Art Unit	
	Vidya Sagar	2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-9 and 12-15* is/are rejected.

7)☒ Claim(s) *4,-6, 10-11, 16-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 December 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *Jun10,Jul 11, 2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,2,7,8,12,13,14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flammer George Henry III, et al. (US 6,480,497) in view Prathima Agrawal (US 5974327 A).

Regarding claim 1, Flammer teaches a method for allocating a communication channel configuration in ad-hoc network (column 1, lines 7-13 the invention cites that the invention is about a mesh network for packet communications which in other words is a ad-hoc network where nodes autonomously connect) using spread spectrum modulation (column 3, lines 29-31 where spread spectrum's usage is cited), comprising: collecting existing and proposed conditions (column 4, lines 26-29, column

7, lines 8-11 where it cites collecting of transmission data by a mesh of interconnected nodes and that each node continuously collects information regarding measurable on-air parameters, while retaining information about categories like interference.); estimating a respective interference factor set for each existing transmission between certain said nodes in relation to at least one proposed transmission by a transmitting node(column 4, lines 34-38 where node 11 constantly develops performance metrics between itself and other regularly linked nodes which is similar to the claimed invention's estimating a respective interference factor because it can be presumed that the performance metrics also contains data about nodal interference.);
Flamer does not teach assigning a communication channel to said transmitting node for proposed transmission based on calculated minimum interference factor set. However Agrawal (5,974,327) teaches assigning a channel based on minimum interference (column 3, lines 21-25 where it cites that a mobile station is allocated frequency channel based upon calculation of lower interference); therefore it is inherent that minimum interference is calculated. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine channel assignment of Agrawal to Flamer's collecting and estimating of transmission data and interference data. Motivation being communications reliability and reliable throughput.

Regarding claim 2, 8 Flammer teaches that communication channel configuration includes a frequency channel and a code channel (column 3, lines 29-30 where spread spectrum is cited).

Regarding claim 7 and 12 Flammer teaches a memory to collect existing and proposed transmission information between nodes in said network (collecting existing and proposed conditions (Fig.2, element 30, column 4, lines 26-29, column 7, lines 8-11 where it cites collecting of transmission data by a mesh of interconnected nodes and that each node continuously collects information regarding measurable on-air parameters, while retaining information about categories like interference.);
A controller estimating a respective interference factor set for each existing transmission between certain said nodes in relation to at least one proposed transmission by a transmitting node(Fig.2, element 24, column 4, lines 34-38 where node 11 constantly develops performance metrics between itself and other regularly linked nodes which is similar to the claimed invention's estimating a respective interference factor because it can be presumed that the performance metrics also contains data about nodal interference while it is to be noted that each node has controller in it.); Flamer does not teach assigning a communication channel to said transmitting node for proposed transmission based on calculated minimum interference factor set. Flamer does not teach assigning a communication channel to said transmitting node for proposed transmission based on calculated minimum interference factor set. However Agrawal (5,974,327) teaches assigning a channel based on minimum interference (column 3, lines 21-25 where it cites that a mobile station is allocated frequency channel based upon calculation of lower interference); therefore it is inherent that minimum interference is calculated. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to combine channel assignment of Agrawal to Flamer's collecting and estimating of transmission data and interference data. Motivation being communications reliability and reliable throughput.

Regarding claims 13 and 14 Flammer teaches computer media, and storage (column6, lines 50-54).

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flammer; George Henry, et al. (US 6,480,497) in view Prathima Agrawal (US 5974327 A) and in further view of A.R. Raghavan, et al. (An unslotted multi channel-access protocol).

Regarding claim 3 and 9 Flammer and Agrawal teach all of claim 1 but fail to teach interference factor based on path loss and distance between nodes. However Raghavan (An unslotted multi channel-access protocol) teaches interference calculation based on distances and path loss between nodes (Page 52, paragraph 4 where attenuation or path loss is computed and it is also mentioned that the diameter or the distance between the nodes is adjusted such that interference is almost zero). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine interference based upon distance between nodes to

allocating a channel of Flammer and Agrawal. Motivation being reliability in communications.

Regarding claim 15 Flammer and Agrawal teach all of claim 1 but fail to teach respective interference sets based on information including respective distances. However Raghavan (An unslotted multi channel-access protocol) teaches interference calculation based on distances and path loss between nodes (Page 52, paragraph 4 it is mentioned that the diameter or the distance between the nodes is adjusted such that interference is almost zero). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine interference based upon distance between nodes to allocating a channel of Flammer and Agrawal. Motivation being reliability in communications.

Allowable Subject Matter

2. Claims 4,5,6,10,11,16,17,18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vidya Sagar whose telephone number is (571) 272-8196. The examiner can normally be reached on Monday thru Friday 8:00 AM to 4:30

PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vidya Sagar
Examiner
Art Unit 2666

VS

CHIEH M. FAN
PRIMARY EXAMINER